RESIN CAR WORKS
RCW
P.O. BOX 42
BYRON, IL 61010
Freight Cars of Every Description

IC 166000-166999 Series 1937 AAR Autocar Mini-Kit #6.01

Introduction
Thank you for your interest in Resin Car Works and this kit. Resin Car Works is not a business in the traditional sense. Its purpose is to share in the fun of prototype railroad freight car modeling and their operations with others by providing unique and different equipment that is not readily available. Several friends assist with various production phases, so it is not quite a one-man operation. To list a few who helped with the production of this kit I would like to thank Tom Madden for the gorgeous castings; Jerry Hamsmith for the decal artwork; and to Eric Hansmann the keeper of the website and blog.

This is a “CRAFTSMAN” level resin mini-kit and its construction should not be attempted by anyone who has not built similar types of models. The kit consists of resin detail parts; Plano Model Products etched 7 rung ladders; various Tichy parts; Tahoe Models trucks and decals. The modeler will have to supply all other parts to create a finished model such as a boxcar body, couplers, wheels, grabs, eye bolts, wire, etc. See the Resin Car Works website (www.resincarworks.com) for more prototype information and photos.

Warranty
All sales are final. There will be no exchanges or returns. Resin Car Works will replace any part(s) found to be defective due to manufacturing or shipping to the original purchaser within the first 30 days after shipment. The damaged part(s) must be sent back with your request for replacement. As these are limited production kits, do not ask for replacement of parts that you damage or lose after the 30-day period.

Liability
Resin Car works will not be responsible or held liable for any and all personal injury and/or health problems, short and/or long term, which may result from the use and/or misuse of tools, adhesives, materials, castings, paints or any other product(s) used to construct and/or contained in this kit. This kit contains polyurethane castings. Although non-toxic in its cured state, dust is created during filing, sanding and drilling. Your workspace should have air circulation and/or ventilation. Always work in a well-ventilated room. Wear a dust mask or respirator and safety glasses for protection. Always wash your hands when you are finished working.

History
These 1000 cars were built by Pullman-Standard (166000-166499) and American Car & Foundry (166500-166999) in 1937 under order lots 5560 and 1660, respectively. The cars were delivered in late 1937. These Automobile cars had a 40' 6" IL, a 9' 2" IW, and an initial 10' 5" IH. The cars were equipped with staggered double 6' wide Youngstown corrugated steel doors providing a 12' 6" clear door opening. Additionally, they had “Hutchins” rigid riveted raised panel roofs, Dreadnaught ends consisting of two panels configured in a 5 over 5 corrugated arrangement, Universal XL hand brakes, and AAR Scullin 40-ton trucks. The bill of lading for the ACF cars noted that they were painted #11 Maroon on the sides, ends, and doors. The roof and underframe were coated in black car cement. The trucks were painted black, and the stencils applied to the car were white. The wood running boards were treated with Termiteol – a brand name for a liquid tar preservative substance.

Beginning in October of 1938, 500 cars were renumbered to 35500-35999 due to having their ceiling lining removed and being fitted for Evans Auto Loading Devices. In 1941, these same cars were again renumbered to

36500-36999 when the Loading Devices were altered. The July 1942 ORER lists 496 of these cars still in service. They are listed as having a cubic foot capacity of 3835 with the loaders in position and 3665 with them raised. Their AAR designation had been changed from XA to XAR. The AAR Mechanical Division created an alternate designation in 1947 and these cars became XMR at that time.

Additionally, in 1942, another 497 (all the remaining in-service cars still in the 166000-166999 series) were renumbered to 39000-39496. The AAR designation for these cars remained XA. The cars could not be consecutively numbered with the previous 500 as the intervening numbers had been taken by a newly built series of steel automobile cars and composite automobile cars converted to XM service. Although not noted in the October 1946 ORER, company records show that 35 of these cars were fitted with station wagon loaders in 1945 and then that these loaders were subsequently removed in 1948. Interestingly, the October 1946 ORER does show all remaining 491 of the 39000 series cars classified as XM class cars.

The auto loading devices in the series 36500-36999 were being removed from the cars beginning in 1949. As such, the October 1950 ORER lists cars 36500-36749 as XM class cars. Cars 36750-36999 are still listed as XMR with loading devices. By the January 1953 ORER listing, none of the remaining 485 cars in the series had loaders and all were reported as XM cars. As for the cars in the 39000-39496 series, the January 1953 ORER lists 485 cars left in revenue service and classed as XM class cars.

By October 1955, a few of the remaining 480 cars in the 39000 series cars had been equipped for special loading and designated XAP. The 9 such cars listed in the ORER were 39008, 39060, 39095, 39097, 39142, 39175, 39415, 39440, and 39481. These cars were in captured service, being assigned to carrying transmissions (39008) and Fisher “C” model convertible bodies (remaining cars). The captured service for most of the cars ended in late 1956. The October 1956 ORER again shows 9 cars in this service, but the January 1957 ORER shows only 39008 still designated XAP. Apparently, 39008 remained in this service until late 1959, as the January 1960 ORER is the first to report all cars in the series as classed XM.

Beginning in 1964, the railroad began to change out the trucks on some of these cars. They were given 50-ton trucks, replacing the original 40-ton ones. When this change took place, the cars affected were renumbered by adding a “1” in front of the old number (thus, 39903 became 139903). The July 1965 ORER notes that, of the 469 cars still in service from the 36500 series, 162 of them had been given the new trucks and renumbered. Also, of the remaining 446 cars in the 39000 series, 149 had the new trucks and had been renumbered.

The railroad also engaged in a “rebuilding” program in 1967. Cars that were “rebuilt” were given new numbers in the 211000-211099 series (for the 36500 series cars) and the 211500-211599 series (for the 39000 series cars). It appears that the only outward change in the cars was the removal of the running boards and the shortening of the ladders. However, other cars had those changes as well and retained their previous numbers.

The cars carried 7" livery for each of the road name, initials, and number when built. The word AUTOMOBILE was stenciled to the right of the double doors. Beginning in December of 1947, repaints had the *Main Line of Mid-America* slogan added to right of the doors and AUTOMOBILE was eliminated. After October of 1956, the lines above and below the reporting marks were omitted. Beginning in January of 1960, the 7" IC was replaced with a 9" version. The railroad adopted the “split rail” emblem in December of 1966, and most repaints following that date moved the *Main Line* slogan (now in block letters) to the left of the doors and used the split rail to the right. Some cars were painted Orange beginning in early 1967.

Many cars lasted in revenue service throughout the 1970s. However, the October 1979 ORER shows only one car in the 36500 series and one in the 39000 series. A total of approximately 100 cars were still listed in the 211000 and 211500 series.

Construction

It’s recommended that before you start construction that you familiarize yourself with the additional information and photos on the Resin Car Works website www.resincarworks.com that pertain to this kit.

- **First give the resin parts a good cleaning with Dawn dish detergent and a toothbrush to remove any mold releasing agents. A light sanding of joints also helps parts to bond.**

- **The cast parts are best attached with ACC. When the term "cement" is used in these instructions, it refers to ACC. ACC is a strong adhesive which dries quickly. It can easily attach a part where it is not supposed to be. It will glue skin. Be careful. Place a few drops on a plate of glass and use a wire or pin to transfer small amounts of ACC to the area to be joined. Always wear safety glasses. ACC debonder is a useful tool for removing smudges of ACC from surfaces where it shouldn't be. Place a drop on the offending spot and wipe up.**

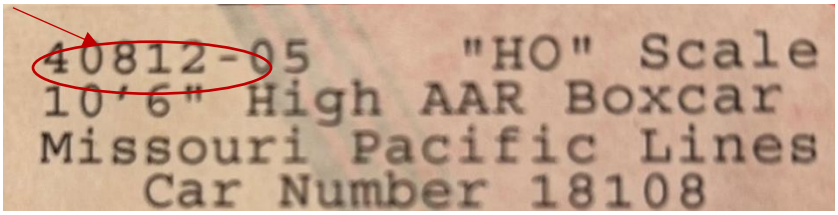
- **GOO or other such products are not recommended for construction except in small quantities as it will soften the casting material.**

- **When a measurement is given it's in prototype feet and inches.**

- **When the word "scrap" is used, it is referring to an item that the modeler is to supply.**

- **Read the instructions thoroughly before starting the build.**

The mini-kit allows for the build of an Illinois Central double door autocar using an Intermountain 10' 6" High AAR Boxcar kit as the base. Any car in the Intermountain 408xx series should work. Those that are pre-painted and lettered will need stripping before the build.



The mini-kit itself contains a cast resin parts sheet, a Tichy AB brake set, a Plano etched brass ladder, Tichy turnbuckles, Tahoe truck side frames, and proprietary decals. As the prototype cars were quickly renumbered into the 36500 and 39000 series, the decals were created for those series.

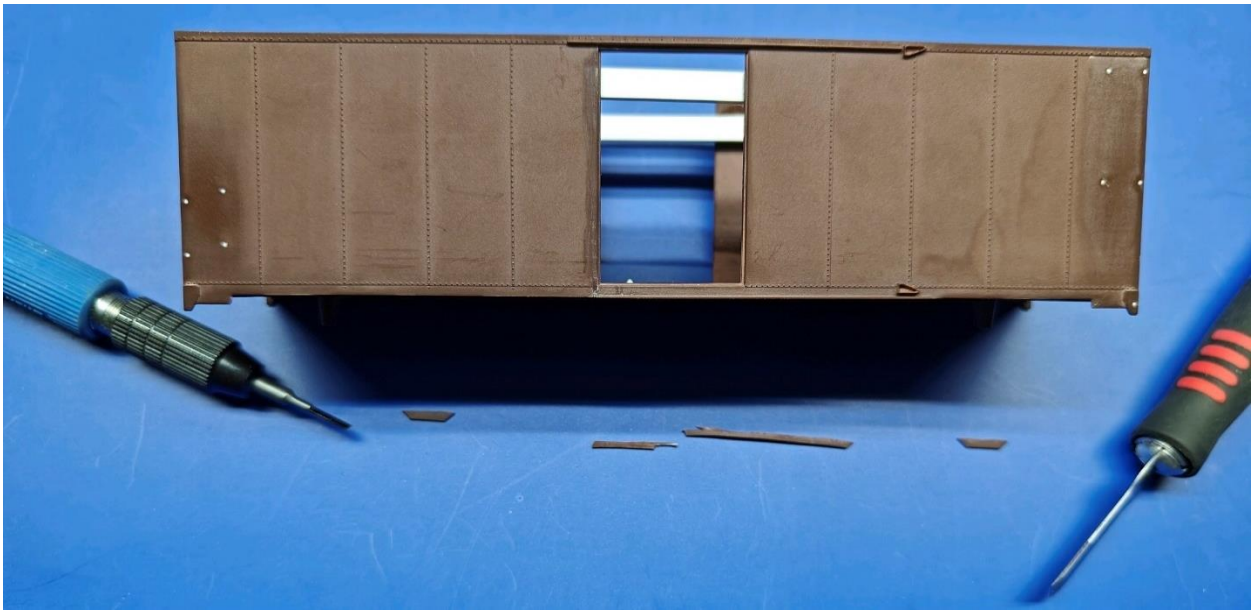
Begin by familiarizing yourself with the parts on the resin parts sheet.

Beginning at the top of the photo shown are: the new side sill and stiffener sections (2), new ends (2), new doors (4), two brake housings – one with a chain and one without, brake step, placard boards (4), pin lifter brackets

(2), retainer valves (2), assorted brake parts and supports, and coupler draft gear. The coupler draft gear (boxes) provided will accept Kadee #158 couplers.

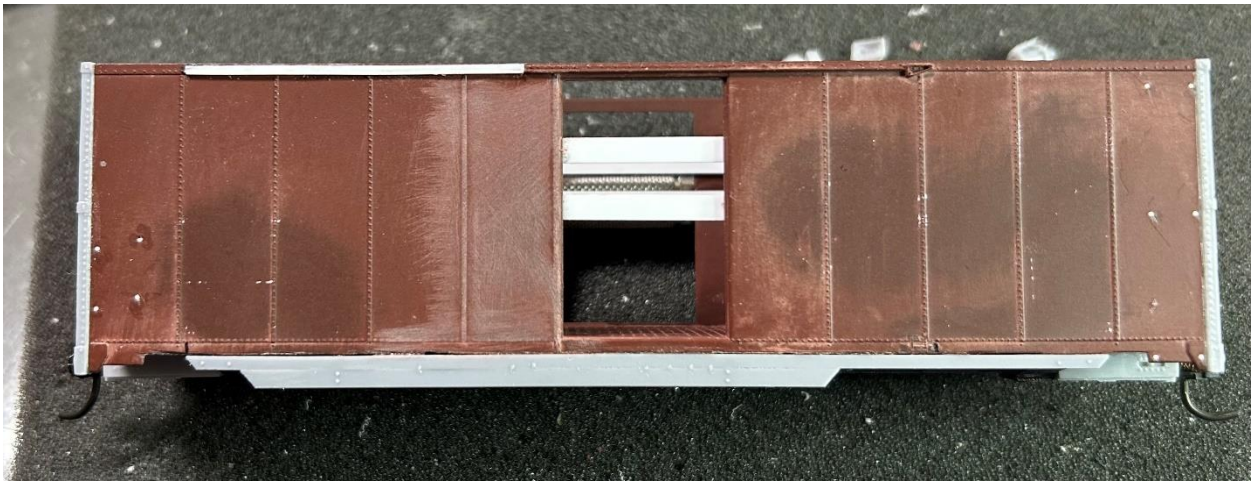
Remove the flash material from the resin parts by sanding the back of the entire sheet and then finishing up with files and a sharp blade. Begin by modifying the Intermountain body. If you started with a body that needed to be stripped, be sure to wash it with dish detergent (Dawn) to remove any stripper residue.

Holes in the body for the side grab irons should be filled with .020” styrene rod as the prototype grabs had one end attached to the end of the car. If using the Intermountain ladders, those ladder holes do not need to be filled. If using the Plano ladder, then fill those holes as well.



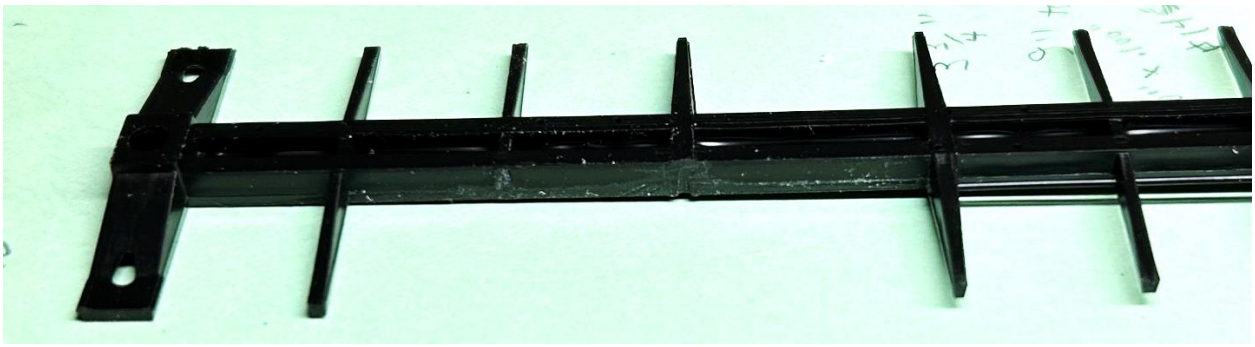
Scrap styrene strips were glued behind the door openings in the car body to provide a little additonal support while manipulating the body during the removal of the sill material. All sill material below the floor level was removed except for the very end tabs. Also the left side door frame was shaved off as well as the rivets there and at the bottom edge of the car. The next vertical row of rivets were also eventually removed to allow for the flat attachment of the second door.

The resin ends were added next. The Intermountain roof was placed (not glued) onto the car and an end butt fitted against it and aligned with the car sides. Adjustments were made as necessary with careful sanding to create a proper fit. Once satisfied, the roof was removed and the end was tacked into place with a very small amount of ACC along the top of the end and the car body. The roof was again added and the fit checked. Once a true fit was verified, the roof was set aside and the holes in the car body end were used to add more ACC. The process was repeated on the other end of the car.

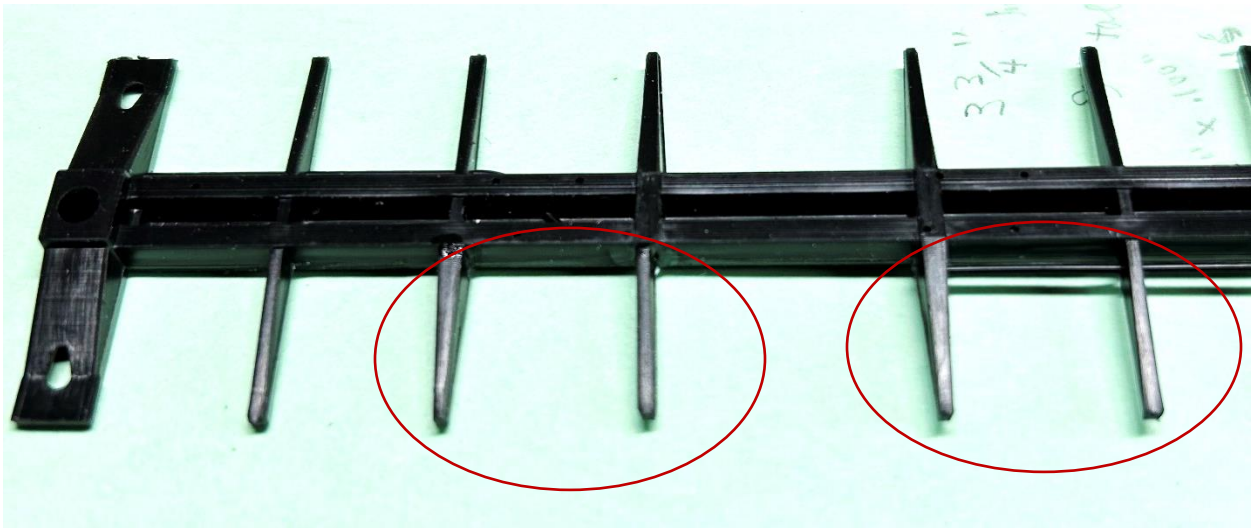


The resin side sills were then added. After the fact, it was determined that the stiffener is actually slightly too long. The top edge of the stiffener (not the sill piece) should end on the left at the second vertical row of rivets. The same angle should be maintained. This would be much more easily done before adding the piece to the car. Simply measure the difference and make two cuts with a single edge razor blade. The photo above shows the addition of the sill before the change was made.

The Intermountain center sill and bolsters are fine to use as is. However, the crossbears are designed for a single door car and must be (should be – your choice) rearranged for the double doors. The second and third crossbearers should be exchanged so that the major crossbearers sit at the outer edge of the doors. Cut them off of the Intermountain center sill and glue them back in their new positions. The floor should also be “cleaned” of any cast on details.



This will also cause some necessary changes to the floor as the stringers must be modified to allow the crossbearers to sit flat against the floor in the new configuration. If adding a train line, now is the time to do that as well. The center sill and bolsters were added to the floor and holes for the draft gear were drilled. Couplers were added and trucks applied. The type of couplers and draft gear used is the modeler's choice. A test of coupler height was made. On the cars built here, no change was necessary. Then the trucks were removed to allow for the detailing of the underframe.



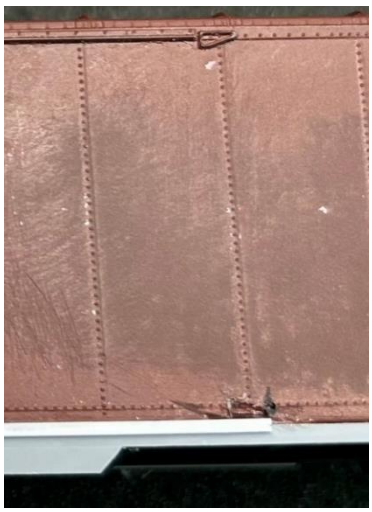
NEW OLD

You can now add as much or as little detail to the underbody as you wish.

The above photos show a “standard” compliment of detail parts. They include the resin kit parts for the reservoir, cylinder, and control valve pieces. The brake levers are also from the resin parts sheet. The guards are a combination of Intermountain parts (black) and a 23-inch straight grab. All wire used for the plumbing and rods was .010” Tichy PBW for simplicity. The chain at the end of the cylinder piston is from Campbell and the dirt collector is off of the Tichy AB set.

The resin doors were added next and the door guides were constructed from styrene strips.

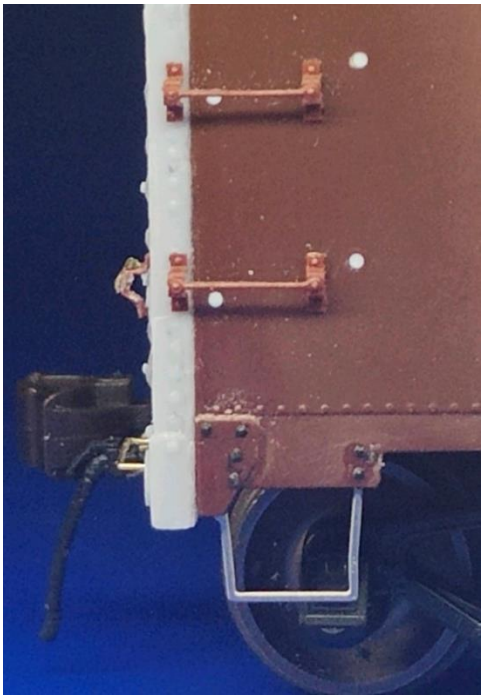
The doors themselves should fit so that the left-hand door is just short of the rivet line on the car body. This makes the right-hand door placement to just cover the hole in the car side.

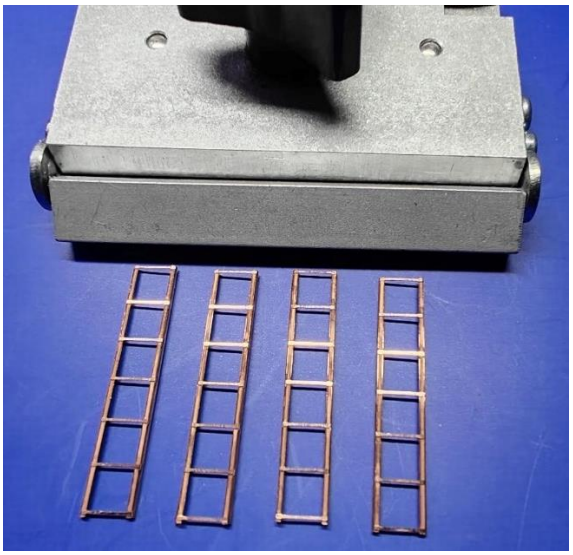


The lower door guide was constructed from a section of .015” x .030” styrene glued to the face of the body fitted tightly against the bottom of the door. The .030” side being glued to the car side. The length was determined by consulting the prototype photos and marks made on the lower edge of the body as a guide. The upper door guide was “extended” by matching the existing one on the car with a .010” piece of styrene as wide as the upper batten strip (approximately .040”). The rivets on the batten strip were first sanded off before applying the .010” piece. The guide itself is a strip of .010” x .020” styrene glued to the bottom of the new batten piece. Again, the length of the section was determined from prototype photos and the body marked.

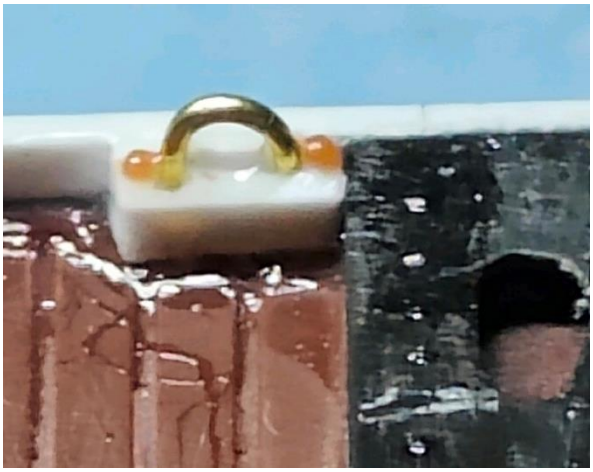
If you have not added weight to the car already, you should do so now. This can be done in a number of ways. One of them is to add hex nuts over the bolsters. These were attached first with *Ultra Glue* from AMMO. After the glue had cured, ACC was added to help ensure a permanent bond.

After the above steps, the roof was permanently added to the car body. Applying various details to the body was next. The grab irons were correctly positioned (Kadee bracket grabs were used), and Yarmouth sill steps designed for Intermountain cars were attached. The Plano ladders supplied with the mini-kit parts were shortened (the stiles were cut immediately above and below the end rungs) to match the prototype. They were then bent using a UMM-USA bender.



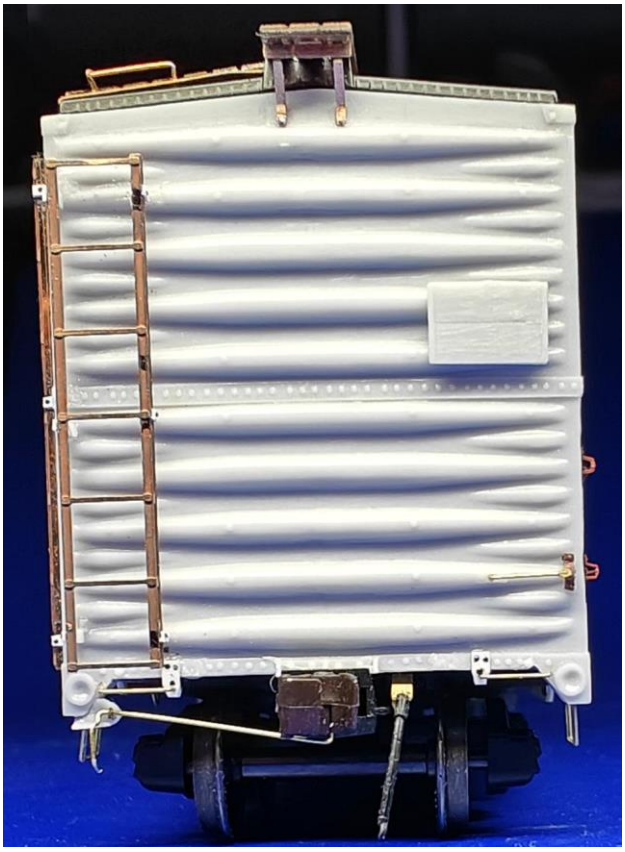


Styrene bits were used to serve as the mounting braces, glued into place, and then cut to the correct length. This was also done for the end ladders. On the ends, the 020” x .030” styrene bits were trimmed to slightly different lengths to accommodate the curvature of the end.



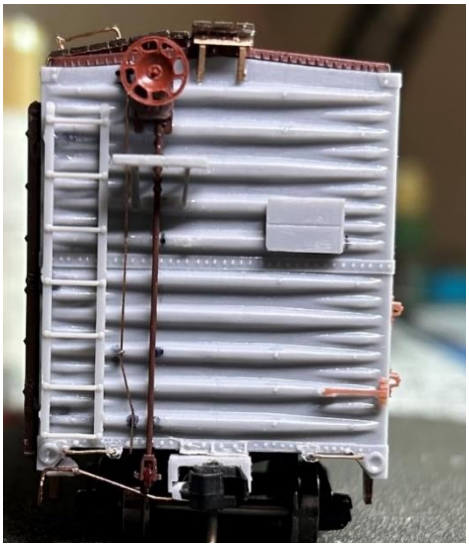
An alternative could be to use the Intermountain ladders. Their mounting pins can be used for the sides and ends. The top and bottom of the stiles should have been shortened to just above and below the end rungs. Also, A-Line type “B” stirrups could be used for the sill steps as they have the correct shape. The towing loops were made from .018’ brass wire and formed around a file handle. They are positioned just to the inside of the bolsters.

The placard and route boards were added to the car’s right-hand door and placed per prototype photos. If desired, the gusset plates applied to cars for added reinforcement around the doors can be created from .005” styrene. For the car shown above, the upper door guide was replaced entirely, rather than extended. Rivets shown are a combination of Archer and harvested ones from Athearn car bodies.



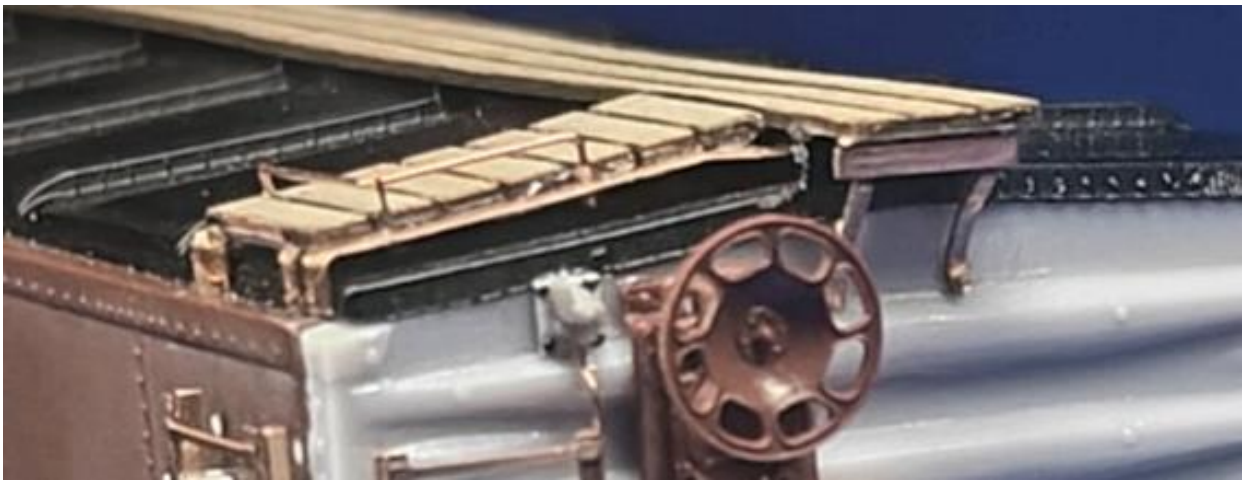
The end detail requires the addition of an inside support for the lower grab irons. The prototype had these grabs below the floor level. The new support was formed from .005” styrene and shaped to mimic the prototype. The location from the car side was determined by the to be applied 18” grab iron. A .020” x .020” section was glued to the bottom of the end behind the location of the support. The support was then glued to the car end and this .020” x .020” piece. #79 holes were drilled into the support and the car body just inside the pole pocket and the 18” grab iron installed. This was done for all four of the lower end grabs.

Additional end detail shown in the above photos include the placard board and cut lever mount from the resin parts sheet, the Plano ladder, and a half Kadee bracket grab used for the upper right hand grab iron. The cut lever itself was created from .012” brass wire. The air hose bracket is from Yarmouth and the air hose from Moloco. The modeler can choose their favorites for those parts.



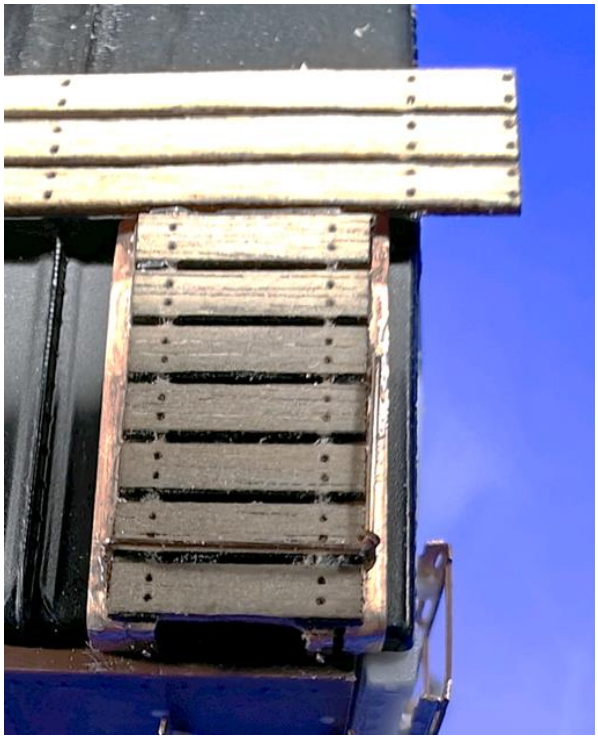
The B end of the car includes all of the items just mentioned plus those for the power brake items. The Intermountain parts can be used, or other after-market products can be substituted.

The Intermountain brake housing, chain and stem were used on this car. The car modeled had a Universal brake wheel, so one from Kadee was substituted. The brake wheel was not added until after the running board was mounted onto the car. The resin retainer valve, hidden behind the brake wheel in this photo, was used and .008” brass wire was run from it to the bottom of the car following the shape of the prototype. The anchor is a Yarmouth eye bolt. The brake step is also from the resin parts sheet and the step supports are from the Tichy AB set.



The final piece to be finished in the build is the application of the running board and the laterals. The prototype had a wooden running board and the Yarmouth set (#255) was used to model it. The lateral piece of the Yarmouth parts group can be used as is, however, the prototype had a slightly different arrangement of the lateral supports. The supports were outside the boards on the prototype, rather than under the boards as would be normal.

If desired, the Yarmouth piece can be narrowed, and then additional brass strips used as the supports as shown in the above photo. The photos below show the process.



The final running board, with the corner grabs and Yarmouth eyebolts inserted, is shown in the next photo.

The car was then washed with Dawn again and allowed to air dry. The original paint specifications from the ACF bill of materials indicated #11 Maroon for the sides, ends and doors; Milar black car cement for the roof and underframe; Termiteol for the running boards; Black paint for the trucks and White stencils. As the build represent cars from 1955, the entire car was painted with TruColor #205. Weathering was done with oils and Pan Pastels powders.

IC 36670 had not yet been weathered when these photos were taken.

IC 39407 had already been placed into revenue service.